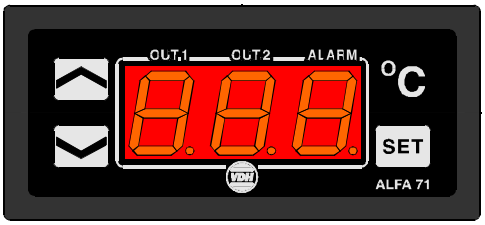
User manual
ALFANET 71-2SP
Thermostat with
2 set points



VDH doc. 080659 **Version: v1.0** **Date: 21-05-2008**
Software: A71NW2SP **File: Do080659.WPD** **Range: -50/+50,0˚C**

* Installation.

On the upper side from the **ALFANET 71-2SP** is shown how the sensor, supply, output and relays should be connected. After power up a self test is started. If the self test is completed the measured temperature will be shown on the display. Normally this will be the temperature from sensor-1 unless sensor-2 is programmed as a control sensor (P05=1). In that case the average temperature from both sensors will be shown. This will also be the control temperature. The **ALFANET 71-2SP** can be read out and controlled on the pc.

* Control.

The **ALFANET 71-2SP** thermostat can be controlled by four push buttons on the front:

SET	- viewing / changing the adjusted value and reset alarm.
UP	- raise the adjusted value.
DOWN	- lower the adjusted value.
˚C	- hidden key above the **SET** key.

* Viewing and changing the set points.

Set point heating: By pushing the **SET** and the **UP** keys simultaneously the adjusted heating set point will be visible. The dots from the first and the last digit also starts flashing.

Set point cooling: By pushing the **SET** and the **DOWN** keys simultaneously the adjusted cooling set point will be visible. The dot from the last digit also starts flashing.

To change the set point it should be made visible as described. Release the keys. By pushing the **SET** key again, the set point can be adjusted with the **UP** or **DOWN** keys. A few seconds after releasing the keys the measured value will be visible again.

* Viewing separate temperature.

By pushing the **UP** and **DOWN** keys simultaneously the individual temperatures from both sensors can be read out. After releasing the keys it is possible to read out the measured temperature from sensor 1 by pushing the **UP** key and the measured temperature from sensor 2 by pushing the **DOWN** key. A few seconds after releasing the keys the normal temperature will be visible again.

* Status of the Relays.

By pushing the hidden **˚C** key the display shows the status of the relays. The three digits are indicating the status from the relays, hereby 0=off and 1=on. The code 110 means that relay 1 and relay 2 are on and relay 3 is off.

* Setting internal parameters.

Next to the adjustment of the set point, some internal settings can be made like differentials, sensor-adjustments, set point-range and alarm-settings.
By pushing the **DOWN** key for more than 10 seconds, you enter the 'internal programming menu'. On the left display the upper and the lower segments are flashing. Over the **UP** and **DOWN** keys the required parameter can be selected (see table for the parameters). If the required parameter is selected, the value can be read-out by pushing the **SET** key. Pushing the **UP** and **DOWN** keys allows you to change the value of this parameter.
If no key is pushed for 20 seconds, the **ALFANET 71-2SP** changes to it's normal operation mode.

* Adjusting the sensors.

The sensors can be adjusted with the sensor offset (parameter 06(sensor-1) and parameter 07(sensor-2)). Indicates a sensor e.g. 2˚C too much, the according Sensor-offset parameter has to be decreased with 2˚C.

* Error codes.

On the display from the **ALFANET 71-2SP** can appear the following error messages:

LO	- Minimum alarm.	Solution E1,E2:
HI	- Maximum alarm.	Check if the sensor is connected well.
E1	- Sensor-1 defect.	- Check the sensor (1000Ω/25˚C).
E2	- Sensor-2 defect.	- Replace the sensor.
EEE	- Adjustments are lost.	Solution EEE:
		- Reprogram the adjustments.

-L- - In case of sensor short-circuit the display alternates between error-code **E..** and **-L-**, as indication for a short-circuit sensor.

-H- - In case of open-circuit sensor the display alternates between error-code **E..** and **-H-**, as indication for a open circuit sensor.

Reset Alarm. When a error-messages appears it can be reset by pushing the **SET** key. The function of this key depends on parameter P37.

* Technical details.

Type	: ALFANET 71-2SP Thermostat
Range	: -50/+50,0˚C, above -10˚C read out per 0,1˚C
Supply	: 12Vac 50/60Hz (-5/+10%)
Read out	: 3-digit 7-segments display
Relays	: Ry1= SPST(NO) 250V/8A (cos ϕ=1) of 250V/5A (cos ϕ=0.4)
	Ry2= SPST(NO) 250V/8A (cos ϕ=1) of 250V/5A (cos ϕ=0.4)
	Ry3= SPDT(NO/NC) 250V/8A (cos ϕ=1) of 250V/5A (cos ϕ=0.4)
	Relays have one common (C).
Control	: through push buttons on the front.
Front	: Polycarbonate IP65
Sensors	: 2x SM 811/2m (PTC 1000Ω/25˚C).
Dimensions	: 35 x 77 x 71,5mm (hwd)
Panel cut out	: 28 x 70mm (hw)
Accuracy	: ± 0,5% from the range.

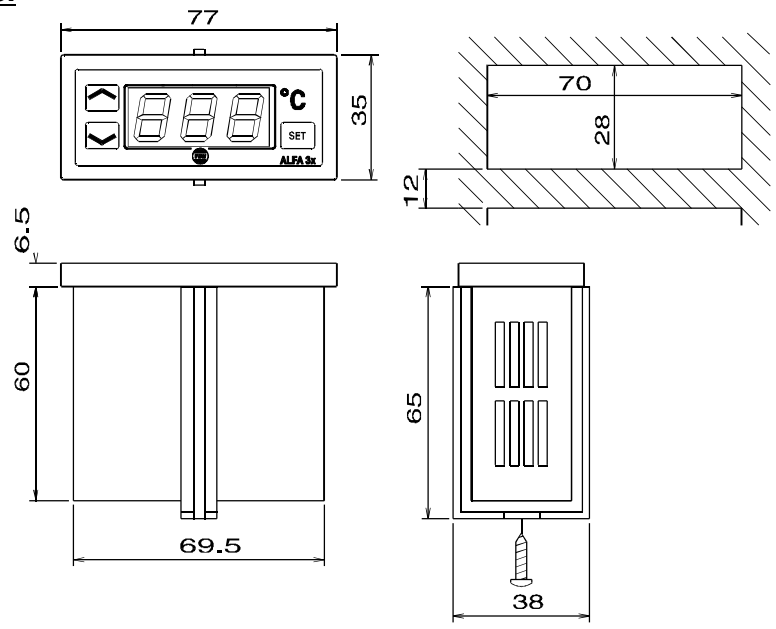
- Provided with memory protection during power failure.
- Equipped with self-test function and sensor-failure detection.
- Connection with screw-terminals.
- Special version on request available.

* Parameters ALFANET 71-2SP

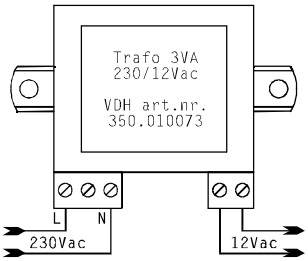
Para-Meter	Description Parameter	Range	Default value
01	Function Relay 1	1=Cooling 2=Heating 3=Alarm	1
02	Function Relay 2	1=Cooling 2=Heating 3=Alarm	2
03	Function Relay 3	1=Cooling 2=Heating 3=Alarm	3
05	Function sensor 2	0=Not present 1=Control 2=Alarm	0
06	Offset temperature sensor 1	-15.0..+15.0˚C	0.0
07	Offset temperature sensor 2	-15.0..+15.0˚C	0.0
10	Relay 2 switches on	0=Temperature 1=Time	0
11	Relay 3 switches on	0=Temperature 1=Time	0
12	Switch on delay relay 2	0..99 min.	15
13	Switch on delay relay 3	0..99 min.	15
14	Switching differential relay 1	0.1..15.0	0.5
15	Offset relay 1	-15..+15	0.0
16	Switching differential relay 2	0.1..15.0	0.5
17	Offset relay 2	-15..+15	0.0
18	Switching differential relay 3	0.1..15.0	0.5
19	Offset relay 3	-15..+15	0.0
20	Switch on delay cooling	0..99	0
21	Switch off delay cooling	0..99	0
22	Parameter 20/21 in sec. of min.	0=seconds 1=minutes	0
23	Minimum on time cooling	0..99 min.	0
24	Minimum off time cooling	0..99 min.	0
25	Minimum adjustable set point	-50.0..+50.0˚C	-50
26	Maximum adjustable set point	-50.0..+50.0˚C	+50
27	Read out above -10˚C on whole degrees	0= No 1= Yes	0
30	Type Alarm	0= No 1= Absolute 2= Relative	1
31	Minimum alarm set point	-50.0..+50.0˚C	-50
32	Maximum alarm set point	-50.0..+50.0˚C	+50
33	Time delay minimum alarm	0..99 min.	0
34	Time delay maximum alarm	0..99 min.	0
35	Relay function alarm relay	0= fail safe alarm 1= control alarm	0
36	Reset alarm relay after recovering alarm	0= No 1= Yes	0 0
37	Reset alarm relay after manual reset	0= No 1= Yes	0
40	Control delay after power failure	0..99 min.	0
41	Forced relay function at sensor failure	0= No 1= Cooling 2= Heating	0
90	Network number	1..31	1
95	Software version	0..255	-
96	Production year	00..99	-
97	Production week	1..52	-
98	Serial number (x1000)	0..255	-
99	Serial number (units)	0..999	-

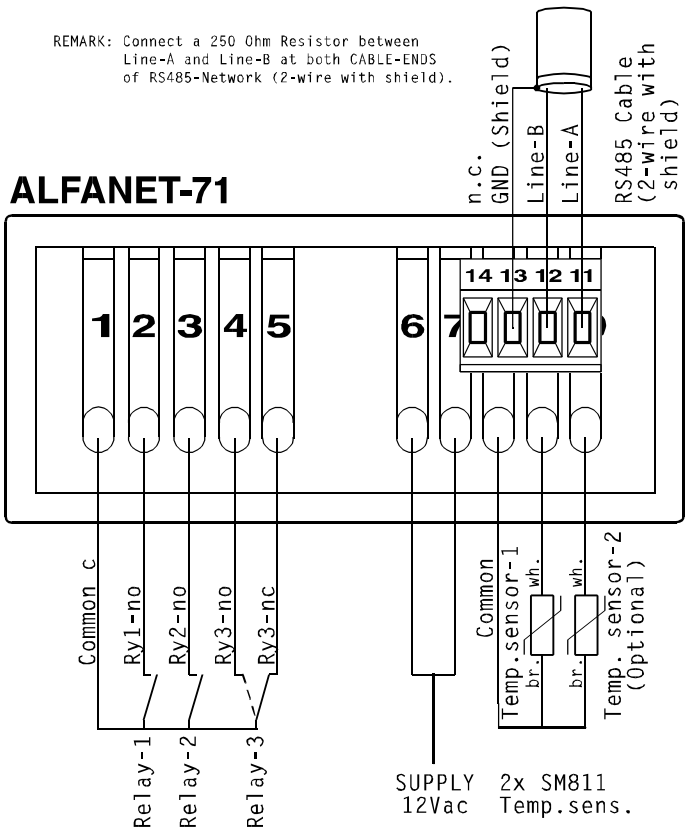
P.S. If type alarm is relative works the minimum-alarm relative from the heating set point and the maximum-alarm relative from the cooling set point.

* Dimensions.



* Connections.





* Address.

VDH Products BV
Produktieweg 1
9301 ZS Roden
The Netherlands

Tel: +31 (0)50 - 30 28 900
Fax: +31 (0)50 - 30 28 980
Email: info@vdhproducts.nl
Internet: www.vdhproducts.nl